

REMARKS

After entry of this amendment, claims 1-31 remain pending. In the present Office Action, claims 1-3, 9, 11-13, and 21 were rejected under 35 U.S.C. § 102(b) as being anticipated by Fernando et al., U.S. Patent No. 6,272,616 ("Fernando"). Applicant respectfully traverses this rejection and requests reconsideration. Claims 4-8, 10, 14-20, and 22 were objected to as being dependent from a rejected base claim but would be allowable if rewritten in independent form.

Allowable Claims

Applicant has rewritten claims 4 and 14 in independent form. Accordingly, Applicant submits that claims 4 and 14 are in condition for allowance. Claims 5-8, dependent from claim 4, and claims 15-18, dependent from claim 14, are similarly in condition for allowance.

Claims 1-3, 9-13, and 19-20

Applicant respectfully submits that each of claims 1-3, 9-13, and 19-20 recites a combination of features not taught or suggested in the cited art. For example, each of claims 1 and 11 recites a combination of features including: "the circuitry configured to concurrently initiate decode of a plurality of instructions having a program order with respect to each other, wherein the circuitry is configured to dispatch at least an initial instruction of the plurality of instructions from a first pipeline stage of the plurality of pipeline stages, and wherein the circuitry is configured to dispatch at least one remaining instruction of the plurality of instructions from a second pipeline stage of the plurality of pipeline stages". Applicant can find no teachings of the above highlighted features in Fernando.

The Office Action rejects claims 1-3 and 11-13 with reference to Fernando. However, the rejection is not clear on which teachings of Fernando are alleged to correspond to the various features of claims 1-3 and 11-13. Rather, the Office Action merely describes Fernando's teachings with regard to: (i) a digital processor that can operate in single threaded mode, SIMD mode, and MIMD mode; and (ii) Fig. 3 of

Fernando and corresponding teachings regarding operation in the SIMD mode. Applicant respectfully requests a more detailed treatment of the claim features and the teachings of the prior art alleged to correspond to those features in future actions.

Applicant respectfully submits that nothing in Fernando's teachings of a digital processor having single threaded mode, SIMD mode, and MIMD mode, and instructions to switch between modes on the fly (as described on page 2 of the present Office Action) teaches or suggests the above highlighted features. Furthermore, Applicant respectfully submits that nothing in Fernando's teachings regarding SIMD mode with respect to Fig. 3 (as described on page 3 of the present Office Action) teaches or suggests the above highlighted features, either. Fernando teaches: "Responsive to the CFORK instruction and the corresponding signal on control line 32c generated by decoder 22a, the state machine 28 issues a control signal on line 32i instruction multiplexor 21 to accept data from input line 36 from the fetch stage 20a of the primary instruction pipeline 16...
Secondary instruction pipeline 18 then commences to execute the code fetched by fetch state 20a, while primary instruction pipeline 16 continues to execute the same instructions" (Fernando, col. 6, lines 43-48 and 51-54). As illustrated in Fig. 3, the decoder 22a also receives the instruction from line 36. Accordingly, at any given point in time, the decoders 22a-22b are receiving the same instruction from the fetch unit 20a. Furthermore, the decoders 22a-22b appear to operate in similar fashion, with similar latency (Fernando, col. 4, lines 45-50). None of this SIMD operation in Fernando teaches or suggests "the circuitry configured to concurrently initiate decode of a plurality of instructions having a program order with respect to each other, wherein the circuitry is configured to dispatch at least an initial instruction of the plurality of instructions from a first pipeline stage of the plurality of pipeline stages, and wherein the circuitry is configured to dispatch at least one remaining instruction of the plurality of instructions from a second pipeline stage of the plurality of pipeline stages".

For at least the above stated reasons, Applicant submits that claims 1 and 11 are patentable over the cited art. Each of claims 2-3 and 9-10 depend from claim 1, and thus are patentable over the cited art for at least the above stated reasons as well. Each of

claims 12-13 and 19-20 depend from claim 11, and thus are patentable over the cited art for at least the above stated reasons as well. Each of claims 2-3, 9-10, 12-13, and 19-20 recite additional combinations of features not taught or suggested in the cited art.

Claims 21-22

Applicant respectfully submits that each of claims 21-22 recite combinations of features not taught or suggested in the cited art. For example, claim 21 recites a combination of features including: "the decode unit coupled to dispatch instructions into a plurality of positions input to an execution subsystem, wherein the plurality of positions are indicative, to the execution subsystem, of a program order of instructions concurrently dispatched into the plurality of positions". Applicant can find no teaching of Fernando of the above highlighted features. It is unclear what teachings of Fernando are alleged to correspond to the above highlighted features of claim 21, as discussed above with regard to claims 1 and 11. However, Applicant can find nothing in the teachings highlighted in the present Office Action that teaches or suggests the above highlighted features of claim 21.

For at least the above stated reasons, Applicant submits that claim 21 is patentable over the cited art. Claim 22 depends from claim 21, and thus is patentable over the cited art for at least the above stated reasons as well. Claim 22 recites additional combinations of features not taught or suggested in the cited art.

New Claims

Applicant respectfully submits that each of new claims 23-31 recite combinations of features not taught or suggested in the cited art. For example, claim 23 recites a combination of features including: "the circuitry configured to concurrently initiate decode of a plurality of instructions having a program order with respect to each other, wherein the circuitry is configured to dispatch at least an initial instruction of the plurality of instructions from a first pipeline stage of the plurality of pipeline stages, and wherein the circuitry is configured to dispatch at least one remaining instruction of the plurality of instructions from a second pipeline stage of the plurality of pipeline stages". Claims 24-

26 depend from claim 23 and recite additional combinations of features. Claim 27 recites a combination of features including: "in a decode unit, concurrently initiating decode of a plurality of instructions having a program order with respect to each other...the decode unit dispatching at least an initial instruction of the plurality of instructions from a first pipeline stage of the plurality of pipeline stages; and the decode unit dispatching at least one remaining instruction of the plurality of instructions from a second pipeline stage of the plurality of pipeline stages". Claims 28-31 depend from claim 27 and recite additional combinations of features.

CONCLUSION

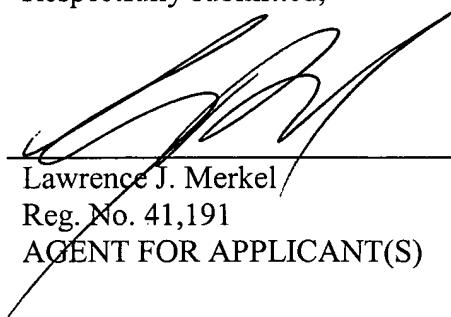
Applicant submits that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5500-97800/LJM.

Also enclosed herewith are the following items:

- Return Receipt Postcard
- Petition for Extension of Time
- Request for Approval of Drawing Changes
- Notice of Change of Address
- Please debit the above deposit account in the amount of \$506 for fees (\$344 for 4 excess independent claims and \$162 for 9 excess claims over 20).
- Other:

Respectfully submitted,



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AGENT FOR APPLICANT(S)

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